

NOTE ON TEETH OF THE ZIPHIOD WHALE,
MESOPLODON LAYARDII (GRAY), EXHIBITED AT
THE MEETING OF THE SOUTH AFRICAN PHILO-
SOPHICAL SOCIETY,

ON WEDNESDAY, AUGUST 29, 1888,

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AFRICAN MUSEUM.

As long ago as 1865, I made for my predecessor, Mr. E. L. Layard, outline drawings of the heads of two different species of Ziphioid Whales then in the South African Museum; and he sent these drawings to the late Dr. J. E. Gray, at that time Keeper of the Zoological Department of the British Museum, who had bestowed much study on the Cetacea. Dr. Gray determined the two whales in question, merely from the drawings and Mr. Layard's notes, to be both new species, and described them in the Proceedings of the Zoological Society of London for 1865 respectively as *Ziphius Layardii* and *Petrorhynchus Capensis*. The latter has since been identified with *Ziphius indicus*, Van Beneden; but the former (which in the form and development of the teeth is by far the more remarkable) retains its position as a very distinct species, peculiar, so far as known, to Cape seas, and is placed by Prof. Flower (Trans. Zool. Soc. Lond., 1872, vol. viii., p. 211) in Gervais' genus *Mesoplodon*.

The Ziphioid Whales are most nearly related to the Cachalots or Sperm Whales (as is shown in Prof. Flower's memoir just quoted), but, amongst other distinctions, differ remarkably in the very reduced condition of their teeth, which (confined to the lower jaw) are rudimentary and concealed in the gum, with the exception of one pair (or occasionally two pairs) at or towards the extremity. The whales of this group were evidently numerous in Tertiary times, as their abundant remains in the Crag formation testify; but at the present time they are certainly rare, only individual (usually stranded) specimens now and then occurring in various parts of the world.

Mesoplodon Layardii exhibits an extraordinary development of the only two teeth it possesses. They are situated at some little

distance behind the apex of the mandible, are greatly compressed laterally (so as to resemble a thick strap), and slant considerably backward, while they are sufficiently long and curved inward superiorly as to meet, or almost to meet, above the long and narrow snout or beak. At the tip of each of these singular tusks there is in front a conical compressed projection, looking like a small tooth artificially inserted; this Prof. Moseley (*Notes by a Naturalist on the "Challenger,"* 1879, p. 158) regards as the original small cap of dentine of the tooth of the young animal, which, without increasing in size, is carried up by the apparently abnormal growth of the fang, the latter constituting the bulk of the tusk.

Both Mr. Layard and myself were at once struck with the obvious difficulty that, if this singular position and form of the tusks were not due to an individual aberration or monstrous growth, the case was one of a great mammal with its jaws naturally so locked together as to be unable to open its mouth for more than a very little distance. Both Dr. Gray and Professor Owen were inclined to look upon the single original specimen as shewing merely an individual malformation; but, as Prof. Flower has recorded, Mr. Layard possessed a single tooth of another individual having an exactly similar conformation, and the discovery by Prof. Moseley (while here in 1873 on the Cruise of the "Challenger") of the lower jaw, with quite similar tusks, of a third example rendered it almost indisputable that the case was one of normal occurrence in this species. It is not known whether, as Prof. Flower suggests, the tusks are peculiar to the male animal. In connection with the difficulty referred to, it occurred to me in 1865, when examining the type specimen, that possibly the flattened tusks (which even *in situ* on the skull showed some elasticity in yielding and separating when the lower jaw was pressed downward) were to some extent movable at the will of the animal; and I have found, in the account by the late Sir Julius Haast of the capture of an allied Ziphioid Whale (*Berardius Arnouxi*) near Canterbury in New Zealand, that an eye-witness of the dying struggles of this stranded specimen observed its front teeth to be movable and protrusible. The food of these Cetaceans, as far as ascertained, consists, both in the Northern and Southern hemispheres, of *Octopus* and allied cuttle-fish; and, if the mouth of *Mesoplodon Layardii* is as closely locked by the over-arching tusks as it appears to be, it is difficult to understand how it can capture these active and watchful cephalopods.

The tusks of this whale which I have brought for exhibition are unquestionably a natural pair ; agreeing very exactly in size, outline, and curvature. I purchased them for the South African Museum, which since the original skull was sent to the British Museum, had possessed no specimens representing the species. The only particulars I could obtain from the vendor as to their history were to the effect that they were received for sale, among various other "curios," from Knysna on the South Coast of the Colony.

I do not think that the actual locality of the type specimen is on record. Prof. Moseley's two examples were captured at Simon's Bay and Walwich Bay respectively ; the former was stated to be about 10 feet in length, and the latter from 16 to 18 feet.

An animal of such rarity and such exceptional dentition, and apparently peculiar to South African seas, is of great and special interest ; and I trust that, by calling the attention of members of the Society to what is known of the species, further specimens and information may ere long be discovered.